

## SEQUENCE LISTING

<110> Maxygen ApS; H. Lundbeck A/S

<120> Interferon beta-like molecules for treatment of stroke

<130> 0256wo210 - INFB for stroke

<140>

<141>

<160> 51

<170> PatentIn Ver. 2.1

<210> 1

<211> 840

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Expression cassette for expression of IFNB in mammalian and insect cells

<400> 1

acatttctaac	tgcaaccttt	cgaagccttt	gctctggcac	aacaggtagt	aggcgacact	60
gttcgtgttg	tcaacatgac	caacaagtgt	ctcctccaaa	ttgctctcct	gttgtgtcttc	120
tccactacag	ctctttccat	gagctacaac	ttgcttggat	tcctacaaag	aagcagcaat	180
tttcagtgtc	agaagctcct	gtggcaattg	aatgggaggc	ttgaatactg	cctcaaggac	240
aggatgaact	ttgacatccc	tgaggagatt	aagcagctgc	agcagttcca	gaaggaggac	300
gccgcactga	ccatctatga	gatgctccag	aacatctttg	ctattttcag	acaagattca	360
tctagcactg	gctggaatga	gactattgtt	gagaacctcc	tggctaattg	ctatcatcag	420
ataaaccatc	tgaagacagt	cctggaagaa	aaactggaga	aagaagattt	caccagggga	480
aaactcatga	gcagtctgca	cctgaaaaga	tattatggga	ggattctgca	ttacctgaag	540
gccaaaggag	acagtcactg	tgccctggacc	atagtcagag	tggaaatcct	aagggaacttt	600
tacttcatta	acagacttac	aggttacctc	cgaaactgaa	gatctcctag	cctgtgcctc	660
tgggactgga	caattgcttc	aagcattctt	caaccagcag	atgctgttta	agtgactgat	720
ggctaattga	ctgcatatga	aaggacacta	gaagattttg	aaatttttat	taaattatga	780
gttattttta	tttattttaa	ttttattttg	gaaaataaat	tattttttgt	gcaaaaagtc	840

<210> 2

<211> 166

<212> PRT

<213> Homo sapiens

<400> 2

Met	Ser	Tyr	Asn	Leu	Leu	Gly	Phe	Leu	Gln	Arg	Ser	Ser	Asn	Phe	Gln
1				5					10					15	
Cys	Gln	Lys	Leu	Leu	Trp	Gln	Leu	Asn	Gly	Arg	Leu	Glu	Tyr	Cys	Leu
			20					25					30		
Lys	Asp	Arg	Met	Asn	Phe	Asp	Ile	Pro	Glu	Glu	Ile	Lys	Gln	Leu	Gln
			35				40					45			
Gln	Phe	Gln	Lys	Glu	Asp	Ala	Ala	Leu	Thr	Ile	Tyr	Glu	Met	Leu	Gln
			50				55				60				
Asn	Ile	Phe	Ala	Ile	Phe	Arg	Gln	Asp	Ser	Ser	Ser	Thr	Gly	Trp	Asn

65		70		75		80
Glu Thr Ile Val	Glu Asn Leu Leu	Ala Asn Val Tyr His Gln Ile Asn				
	85	90			95	
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr						
	100	105			110	
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg						
	115	120			125	
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr						
	130	135			140	
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu						
	145	150			155	160
Thr Gly Tyr Leu Arg Asn						
	165					

<210> 3  
 <211> 166  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: IFNB variant

<400> 3
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15
Ser Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45
Asn Phe Thr Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Phe Asn Thr
100 105 110
Thr Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160
Thr Gly Tyr Leu Arg Asn

165

<210> 4  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 4  
ggctagcggtt taaacttaag cttcgccacc atgaccaaca agtgcctgct ccagatcgcc 60  
ctgctcctgt 70

<210> 5  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 5  
acaacctgct cggcttcctg cagaggagtt cgaacttcca gtgccagaag ctcctgtggc 60  
agctgaacgg 70

<210> 6  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 6  
gaacttcgac atccccgagg aaatcaagca gctgcagcag ttccagaagg aggacgccgc 60  
tctgaccatc 70

<210> 7  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 7  
ttccgccagg actccagctc caccgggttg aacgagacca tcgtggagaa cctgctggcc 60  
aacgtgtacc 70

<210> 8  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 8  
aggagaagct ggagaaggag gacttcaccc gcggcaagct gatgagctcc ctgcacctga 60  
agcgctacta 70

<210> 9

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 9  
ggagtacagc cactgcgcct ggaccatcgt acgcgtggag atcctgcgca acttctactt 60  
catcaaccgc 70

<210> 10

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 10  
caccacactg gactagtgga tccttatcag ttgcgcaggt agccggtcag gcggttgatg 60  
aagtagaagt 70

<210> 11

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 11  
aggcgcagtg gctgtactcc ttggccttca ggtagtgcag gatgcggcca tagtagcgct 60  
tcagggtgcag 70

<210> 12

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 12  
ctccttctcc agcttctcct ccagcacggt cttcaggtgg ttgatctggt ggtacacggt 60  
ggccagcagg 70

<210> 13

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 13

gagctggagt cctggcggaa gatggcgaag atgttctgca gcatctcgta gatggtcaga 60  
gcggcgtcct 70

<210> 14

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 14

cctcggggat gtogaagttc atcctgtcct tcaggcagta ctccaggcgc ccgttcagct 60  
gccacaggag 70

<210> 15

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 15

caggaagccg agcaggttgt agctcatcga tagggccgtg gtgctgaagc acaggagcag 60  
ggcgatctgg 70

<210> 16

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 16

ctgctccaga tcgccctgct cctgtgcttc agcaccacgg ccctatcgat gaagcaccag 60  
caccagcatc 70

<210> 17

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 17

cactgcttac tggcttatcg aaattaatac gactcactat agggagaccc aagctggcta 60  
gcgtttaaac 70

<210> 18  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 18  
caggaagccg agcaggttgt agctcatctg ttggtgttga tggttggtgct gatgctggtg 60  
ctggtgcttc 70

<210> 19  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 19  
agcagggcga tctggagcag gcacttggtg gtcatgggtg cgaagcttaa gtttaaacgc 60  
tagccagctt 70

<210> 20  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 20  
ccgtcagatc ctaggctagc ttattgcggt agtttatcac 40

<210> 21  
<211> 32  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 21  
gagctcggta ccaagctttt aagagctgta at 32

<210> 22  
<211> 77  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 22

gctgaacggg cgcctggagt actgcctgaa ggacaggatg aacttcgaca tccccgagga 60  
aatccgccag ctgcagc 77

<210> 23  
<211> 35  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 23  
tctccacgcg tacgatggtc caggcgagc ggctg 35

<210> 24  
<211> 70  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 24  
caccacactg gactagtgga tccttatcag ttgcgcaggt agccggtcag gcggttgatg 60  
aagtagaagt 70

<210> 25  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 25  
catcagcttg ccggtggtgt tgcctcctt c 31

<210> 26  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 26  
gaaggaggac aacaccaccg gcaagctgat g 31

<210> 27  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 27  
cacactggac tagtaagctt ttatcagttg cgcaggtagc 40

<210> 28  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 28  
gaggagtctg aacttccagt gccagcgcct cctgtggcag ctgaacg 47

<210> 29  
<211> 33  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 29  
tttaaactgg atccagccac catgaccaac aag 33

<210> 30  
<211> 63  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 30  
cggccatagt agcgcttcag gtgcagggag ctcatcagct tgccggtggt gttgtcctcc 60  
ttc 63

<210> 31  
<211> 63  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 31  
gaaggaggac aacaccaccg gcaagctgat gagtccctg cacctgaagc gctactatgg 60  
ccg 63

<210> 32  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer



<400> 32  
ggcgctcctcc ttggtgaagt tctgcagctg 30

<210> 33  
<211> 39  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 33  
atatatccca agcttttatc agttgcgag gtagccggt 39

<210> 34  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 34  
cagctgcaga acttcaccaa ggaggacgcc 30

<210> 35  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 35  
cgcggatcca gccaccatga ccaacaagtg cctg 34

<210> 36  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 36  
cgcggatcca gccaccatga ccaacaagtg cctg 34

<210> 37  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 37  
gtcctccttg gtgaagttga acagctgctt 30

<210> 38  
<211> 39  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 38  
atatatccca agcttttatc agttgcgag gtagccggt 39

<210> 39  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 39  
aagcagctgt tcaacttcac caaggaggac 30

<210> 40  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 40  
cgcggatcca gccaccatga ccaacaagtg cctg 34

<210> 41  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 41  
gtcctccttg gtgaagttca ccagctgctt 30

<210> 42  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 42

aagcagctgg tgaacttcac caaggaggac

30

<210> 43  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 43  
cgcggatcca gccaccatga ccaacaagtg cctg

34

<210> 44  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 44  
gtcctccttg gtgaagttcc acagctgctt

30

<210> 45  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 45  
aagcagctgt ggaacttcac caaggaggac

30

<210> 46  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 46  
cgcggatcca gccaccatga ccaacaagtg cctg

34

<210> 47  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 47  
cagcttgccg gtggtgttga actccttctc

30

<210> 48  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 48  
gagaaggagt tcaacaccac cggcaagctg 30

<210> 49  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 49  
cgcggtacca gccaccatga ccaacaagt cctg 34

<210> 50  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 50  
cagcttgccg gtggtgttca cctccttctc 30

<210> 51  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 51  
gagaaggagg tgaacaccac cggcaagctg 30